Name:

## ml1112paper: Solve by factoring (v9)

1. Solve the equation

$$x^2 + 3x - 18 = 0$$

$$(x+6)(x-3) = 0$$
$$x = 3$$
$$x = -6$$

2. Solve the equation

$$x^2 + 5x + 6 = 0$$

$$(x+2)(x+3) = 0$$
$$x = -3$$
$$x = -2$$

3. Solve the equation

$$7x^2 + 2x \;=\; 6x^2 - 3x + 6$$

$$x^2 + 5x - 6 = 0$$
$$(x-1)(x+6) = 0$$
$$x = -6$$
$$x = 1$$

4. Solve the equation

$$8x^2 - 6x + 51 \;=\; 7x^2 + 9x - 3$$

$$x^2 - 15x + 54 = 0$$
$$(x-9)(x-6) = 0$$
$$x = 6$$
$$x = 9$$

5. Solve the equation

$$5x^2 - 17x + 14 = 0$$

$$(5x - 7)(x - 2) = 0$$
$$x = 2$$
$$x = \frac{7}{5}$$

6. Solve the equation

$$3x^2 - 34x + 63 = 0$$

$$(3x - 7)(x - 9) = 0$$
$$x = 9$$
$$x = \frac{7}{3}$$

7. Solve the equation

$$7x^2 - 49x + 54 \;=\; 2x^2 - 7x + 5$$

$$5x^2 - 42x + 49 = 0$$
$$(5x - 7)(x - 7) = 0$$
$$x = 7$$
$$x = \frac{7}{5}$$

8. Solve the equation

$$9x^2 - 6x + 24 \;=\; 7x^2 + 9x - 3$$

$$2x^2 - 15x + 27 = 0$$
$$(2x - 9)(x - 3) = 0$$
$$x = 3$$
$$x = \frac{9}{2}$$